

TO: DEVELOPMENT REVIEW BOARD
FROM: CURRENT PLANNING SERVICES
SUBJECT: CASE 83-DR-2003
REQUEST: Approve request to mount a WCF (wireless communication facility) within an existing traffic signal pole
PROJECT NAME: Sweetwater & 94th St. WCF
LOCATION: E SWEETWATER AV / N 94TH ST (NE Corner)

DEVELOPER/OWNER: City Scottsdale
ARCHITECT/DESIGNER: Velocitel, Inc
ENGINEER: N/A
APPLICANT/COORDINATOR: Infranext/Randy Downing
3333 E Camelback Rd Ste 280
Phoenix, AZ 85018
602-522-2655

STAFF RECOMMENDATION: APPROVE subject to the attached stipulations.

CONCURRENCE: The Field Services Division (traffic signal maintenance) and the Traffic Engineering Division (placement of traffic signals) have reviewed and approved the proposed project.

PUBLIC COMMENTS: The applicant has sent letters to 178 property owners who were all within 750 feet of the traffic signal pole. The applicant received two phone calls regarding the project and one letter. All three people had wanted general information about the project and wanted information about safety and impact of the facility. Staff received two phone calls regarding the project asking the same questions as was asked to the applicant.

REQUEST: The applicant requests approval to put a 5 ft. to 7 ft. extension on an existing traffic signal pole that will have one wireless communications facility (WCF) antenna within the pole.

LOCATION & ZONING: The site is located at the northeast corner of Sweetwater and 94th Street. The pole and proposed equipment is located within the city right-of-way.

CHARACTERISTICS: The traffic signal pole, traffic signal control boxes, and landscaping are all existing on the corner.

HISTORY: This is a Type 3 wireless communications facility (WCF) application according to the zoning ordinance because the proposed antenna is within 150 feet of a lot where the existing or planned primary use is a single-family dwelling. All Type 3 applications must receive Development Review Board approval.

DISCUSSION: The applicant will add a 5 ft. to 7 ft. long extension to the existing traffic signal pole. The height of the pole will increase from 30 ft. to 35 ft. - 37 ft. and the diameter of the extension will be 6¼ inches that is a little smaller than the top of the existing pole diameter. One antenna will be placed within the pole extension and the coaxial cables will be placed within the existing pole. The extension will be painted white to match the pole.

New technology will allow the applicant to mount a metro site box directly on the existing signal pole. The new equipment box will be 12"x34"x8". The other related ground mount equipment consists of an h-frame to hold the meter and cell pack. The equipment will not exceed 4 ft. in height and has been stipulated by staff to be placed within the city right-of-way but outside of the visibility triangle.

Bill Verschuren
Senior Project Coordination Planner
480-312-7734

Jayna Shewak
Development Planning Manager

ATTACHMENTS:

- #1-Project Narrative
- #2-Context Aerial
- #2A-Aerial Close-Up
- #3-Zoning Map
- #4-Site Plan
- #5-Elevations
- #6-Details
- A-Stipulations/Ordinance Requirements

PROJECT NARRATIVE

Wireless communication facility

Traffic Signal

Northeast Corner of 94th Street and Sweetwater
Scottsdale, Arizona

AT&T Wireless Project 1055

Background

AT&T Wireless Services is currently providing wireless telephone communications services throughout the Valley and across much of the U.S. Its Federal Communication Commission license for the Arizona region requires it to provide service throughout this market area, including Scottsdale. In response to significant population growth and increased demand for its wireless services, and its commitment to provide service throughout this area, AT&T Wireless is expanding its coverage in Arizona, as well as increasing the number of available channels in the growing urbanized areas of Arizona. To satisfy demand for its wireless services in the vicinity of Sweetwater and 94th Street, AT&T Wireless is requesting approval of a stealth wireless communication facility to be installed on a traffic signal at the intersection of Sweetwater and 94th Street. The application for this site is one in a series designed to provide coverage for residents, businesses, and visitors in the area. It is the goal of AT&T Wireless to work with the City of Scottsdale to build and maintain a competitive wireless network, providing quality wireless service to residents and travelers, offering the benefits of competition as encouraged by the FCC.

Summary of Request

Collocation

Collocation in regards to a wireless communication facility refers to the sharing of a wireless facility by more than one wireless provider or the sharing of an alternative tower structure. The principal benefit from collocation is that fewer wireless communication facilities are needed to serve a given area or an existing structure is shared to reduce the need for new verticality. Collocation has become a favored policy and is often encouraged by many jurisdictions. Knowing that collocation is preferred by the City of Scottsdale, this application is the result of a shared commitment between a wireless carrier and the City of Scottsdale.

Existing Conditions

The City of Scottsdale maintains four traffic signals at 94th Street and Sweetwater. In addition to the traffic signals, there are traffic control boxes and existing utility boxes on the northeast corner. The existing traffic signal is painted with Pittsburg Paint 7-282 ADOT #11 white. The height of the existing traffic signal is 30' and supports the typical traffic light standard arm, crosswalk signal and button, traffic signal, etc.

Nature of Request

This application is for a both a collocation and stealth wireless communication facility. The application is the culmination of coordination work between the City of Scottsdale and AT&T Wireless.

After substantial field surveys this candidate was determined to be the best location for a site to provide coverage in the area. It is always the objective to minimize the visual impact of such facilities. This objective is especially important in residential areas.

AT&T Wireless is proposing to mount a 6 1/4" diameter 5' - 7" long radio frequency transparent canister on top of the existing traffic light standard on the northeast corner of Sweetwater and 94th Street. The canister would be Pittsburg Paint 7-282 ADOT #11 white to match the existing traffic signal. The antennas would be concealed from view within a canister that allows for the sending and receiving of radio signals. The coverage area for the proposed site is represented on the attached radio frequency propagation map.

The coaxial cables would enter the existing traffic signal at the base of the pole and be covered by a new boot, as approved by the City of Scottsdale. The coaxial cable would be concealed within the existing traffic signal.

As discussed with the City of Scottsdale, this type of wireless application is intended to be applied were ever possible to take advantage of existing verticality, while utilizing a standard traffic signal pole design.

This application also takes advantage of new technology that allows for the adaptation of smaller radio equipment. Rather than the need for larger cabinets, the smaller metrosite cabinets are planned for this site. However, rather than mounting the metrosite cabinets on the traffic signal, as done in other communities, the City of Scottsdale requested the cabinets be ground mounted. The only additional equipment required is an h-frame for the meter and cell pack. The h-frame will not exceed 4' in height. These would be mounted to the east of the traffic signal. The proposed h-frame would be positioned between two existing larger utility boxes. Additional vegetation would be placed in front of the h-frame to conceal the additional equipment.

While it is true that the metrosite and h-frame add to the number of utilities at the intersection, this application allows for minimal equipment addition and stealth antennas. This application does not create new verticality. Signalized intersections are busy with power boxes, telco boxes, utilities, etc. servicing our wired and wireless needs. In a perfect world, or maybe even sometime in the future, all our power and signals would be wireless. However, today we are still in need of extemporaneous equipment, both by the City of Scottsdale, wireless carriers, and utilities to serve the needs of Scottsdale residents.

While the intersection of 94th Street and Sweetwater may not be as congested with utility boxes, as some of the major thoroughfares, the traffic light pole that is the subject of this application does have the usual amount of appurtenances and supporting boxes.

Operations

Once the modifications to the site have been completed, antennas mounted and radio and telephone equipment added and tuned, a technician may visit the site once or twice a month for routine maintenance. The wireless site is also self-monitoring and connects directly to a central office for any equipment malfunction or security breach.

Noise, Light, Visual and other Pollutants:

The wireless facility will not use any water, wastewater, or solid waste services. No additional lighting is proposed. The visual impact of the proposed telecommunications additions is minimal due to the existing traffic signal and the stealth antenna application.

Alternatives

There are no commercial buildings within the coverage area. The only existing vertical elements that would allow sufficient height are the traffic light signal poles. So rather than propose any new verticality, this application supports use of an existing facility that has already been approved by the City of Scottsdale.

Notification

178 notification letters with a set of plans and a photo simulation were sent out to all within 750' of the proposed site. A copy of the notice and a listing of the property owners are included with this application. Eleven notification packets were returned by the United States Postal Service. Two phone calls were received. Both callers identified RF as a concern. One caller also stated a concern for seeing the h-frame while he walked on the sidewalk with his daughter. In order to satisfy this concern, additional vegetation would be added to the south of the h-frame to conceal it from the sidewalk. One letter was received requesting additional information. A reply with information on the antennas, the location of a second such application, and possible web sites was sent in response. A copy of the response is included with this application.

Conclusion

It is the goal of AT&T Wireless Services to work in cooperation with the City of Scottsdale in the development of their wireless network. By utilizing stealth material, new technology, and partnering with the City of Scottsdale, this may very well serve as a model for other carriers and other locations. Additionally, this site will provide revenue to the City.



Sweetwater & 94th St.
Wireless Communication Facility (WCF)

83-DR-2003

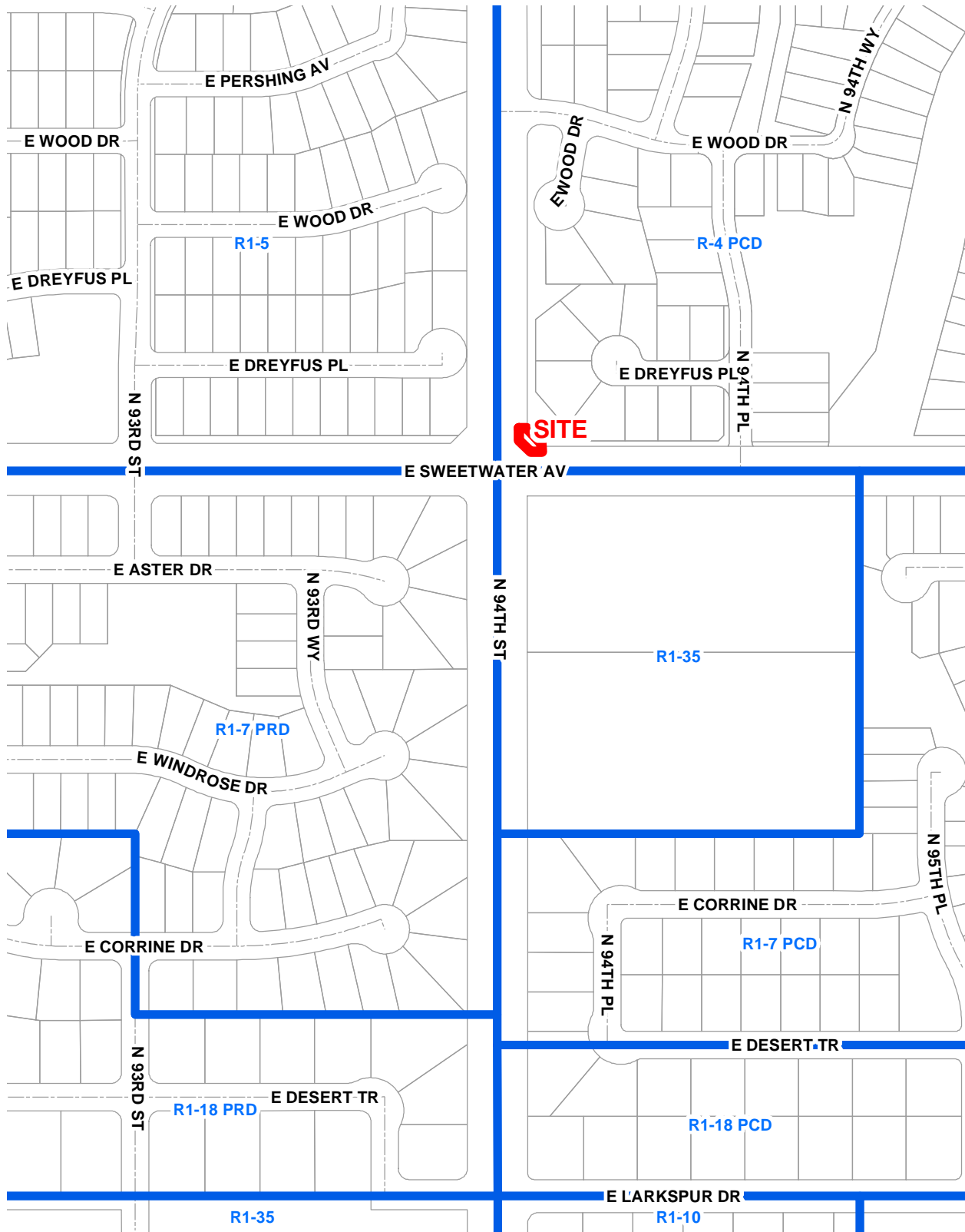
ATTACHMENT #2



Sweetwater & 94th St.
Wireless Communication Facility (WCF)

83-DR-2003

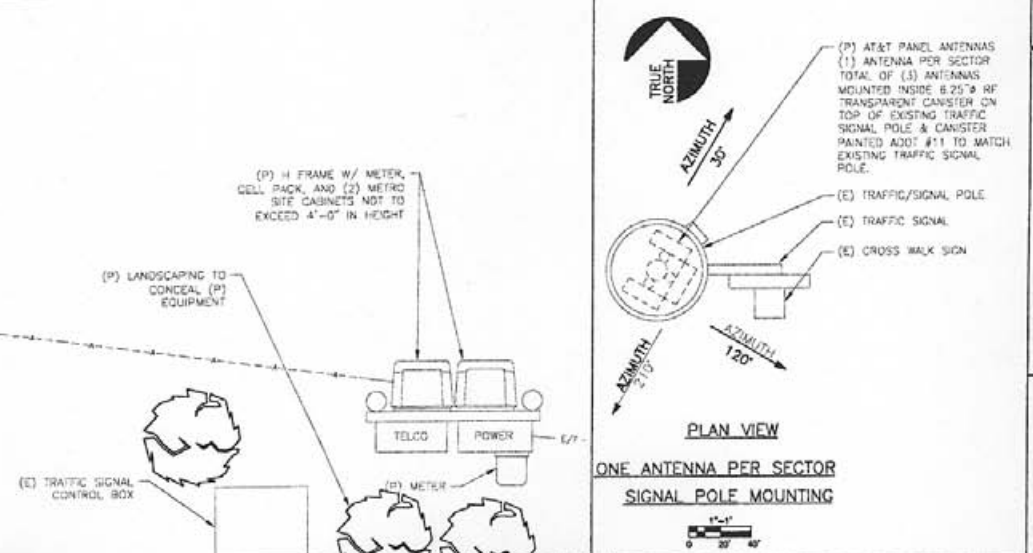
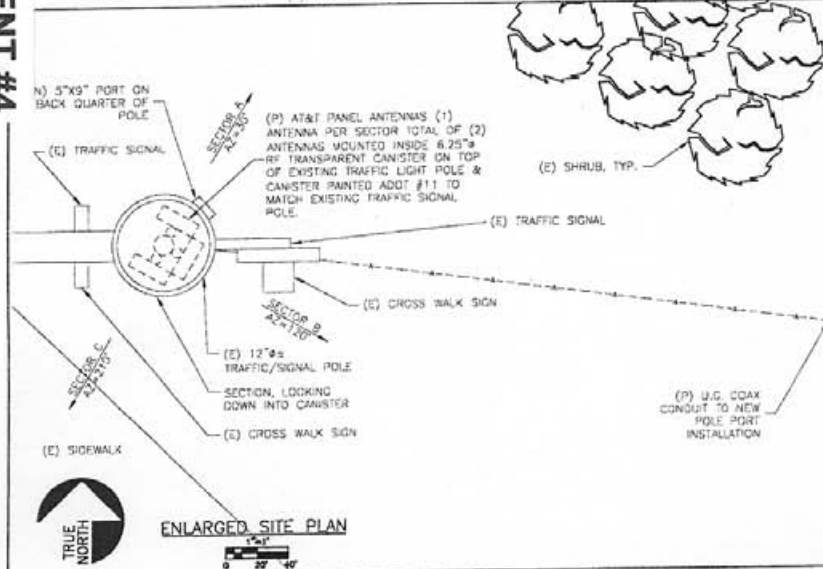
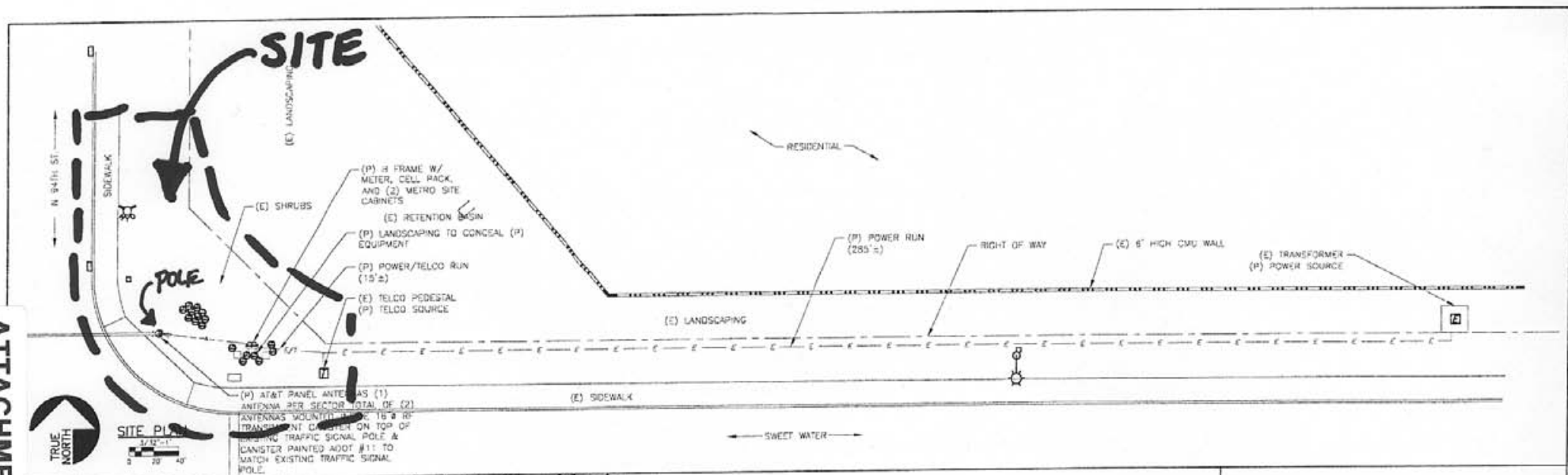
ATTACHMENT #2A



83-DR-2003

ATTACHMENT #3





104TH ST/FRANK LLOYD WRIGHT
SITE NUMBER 24897-615-A-PHNXAZ371

13003 N. 94TH ST
SCOTTSDALE, AZ. 85260

PG0002.0031

AT&T
AT&T WIRELESS SERVICES

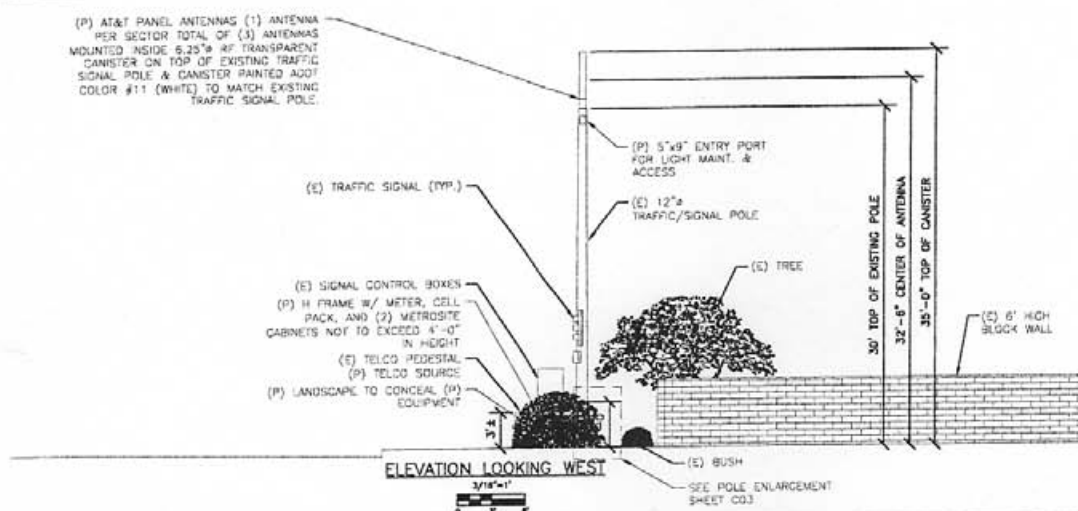
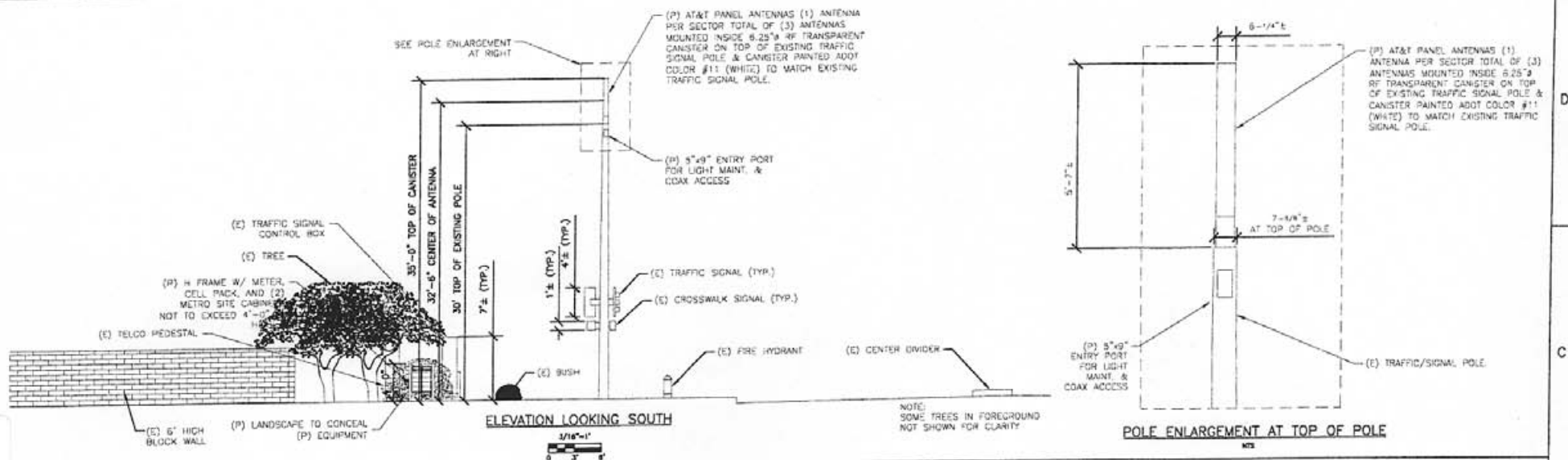
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3	7/1/03	CITY COMMENTS	JL	PP	PP
2	6/4/03	DESIGN CHANGE	JL	BOS	WDS
1	10/28/02	CITY COMMENTS	BCH	BCH	WDS
0	5/3/02	ISSUED FOR ZONING	JW	JP	JP
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE:	AS SHOWN	DESIGNED BY:	JW	DRAWN BY:	CDS

AT&T WIRELESS

SITE PLAN,
ENLARGED SITE PLAN
AND ANTENNA PLAN

24897-615-A-PHNXAZ371 CD1 4

83-DR-2003
11-17-03



104TH ST/FRANK LLOYD WRIGHT
SITE NUMBER 24897-615-A-PHNKAZ371

13003 N. 94TH ST.
SCOTTSDALE, AZ 85280

PO9002.0031



4	8/5/03	CITY COMMENTS	JL	PF	PF
3	7/3/03	CITY COMMENTS	JL	PF	PF
2	8/4/03	DESIGN CHANGE	JL	BOG	MOS
1	10/28/02	CITY COMMENTS	BOH	BOH	MOS
0	5/2/02	ISSUED FOR ZONING	JW	IP	IP
REV. DATE		REVISIONS	BY		
SCALE: AS SHOWN		DESIGNED BY: JW	DRAWN BY: CDS		

AT&T WIRELESS

ELEVATIONS

24897-615-A-PHNKAZ371

4

21 JUN 03

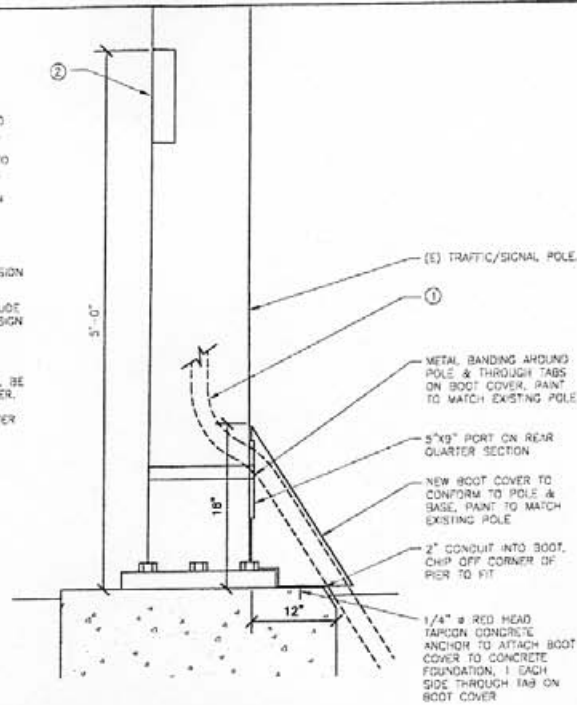
83-DR-2003
11-17-03

PORT DESIGN NOTES

- ① COAXIAL CABLE SHALL BE SLEEVED WITHIN POLE, PVC IS ACCEPTABLE.
- ② A PLACARD SHALL BE ATTACHED TO BACK OF POLE WITH SAFETY INFO. AND CONTACT NUMBERS FOR TURN-OFF OF TELECOMMUNICATION EQUIPMENT.

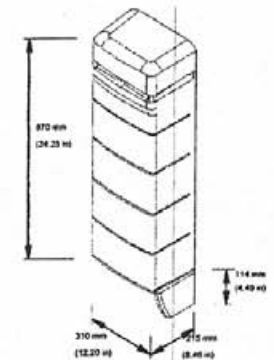
GENERAL NOTES

1. ALL EXISTING WIRING SHALL BE PROTECTED FROM HEAT AND ABRASION DURING PROJECT.
2. CONSTRUCTION PLANS SHALL INCLUDE CERTIFICATION OF STRUCTURAL DESIGN BY THE MANUFACTURER OF EACH POLE. A STRUCTURAL ENGINEER'S STAMP IS REQUIRED.
3. INSTALLATION OF ALL PARTS SHALL BE PERFORMED BY A CERTIFIED WELDER.
4. ANY GROUNDING WIRES SHALL ENTER POLE THROUGH BOOT OR BELOW GRADE OF FOUNDATION.



POLE ENLARGEMENT AT BOTTOM OF POLE

NTS



Dimensions of Nokia MetroSite BTS/HUB/BBU

METROSITE CABINET DIMENSIONS

NTS

104TH ST/FRANK LLOYD WRIGHT
SITE NUMBER 24897-615-A-PHXAZ371

13003 N. 24TH ST.
SCOTTSDALE, AZ 85260



AT&T

AT&T WIRELESS SERVICES

4	6/3/03	CITY COMMENTS	JL	PF	PF
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NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE	AS SHOWN	DESIGNED BY	JL	DRAWN BY	COB



AT&T WIRELESS

METROSITE DETAIL

24897-615-A-PHXAZ371 C03 4

83-DR-2003
11-17-03

DETAILS

**Stipulations for Case:
Traffic Signal WCF – Sweetwater & 94th St.
83-DR-2003**

Unless otherwise stated, the applicant agrees to complete all requirements prior to final plan approval, to the satisfaction of Project Coordinator and the Final Plans staff.

PLANNING

APPLICABLE DOCUMENTS AND PLANS:

DRB Stipulations

1. Except as required by the City Code of Ordinances, Zoning Regulations, Subdivision Regulations, and the other stipulations herein, the site design and construction shall substantially conform to the following documents:
 - a. Architectural elements, including dimensions, materials, form, color, and texture, shall be constructed to be consistent with the building elevations submitted by AT&T Wireless Services with a date by staff of 11/17/2003.
 - b. The location and configuration of all site improvements shall be constructed to be consistent with the site plan submitted by AT&T Wireless Services with a staff date of 11/17/2003.

SITE DESIGN:

DRB Stipulations

2. The Wireless Communication Facility antenna, mounting brackets and hardware shall be painted to match the color of the existing traffic signal pole, to the satisfaction of City staff.
3. Prior to construction, the contractor is required to notify the City of Scottsdale Traffic Signal Supervisor regarding the work schedule by calling 480-312-5634. This note shall be placed on the construction drawings site plan.
4. Prior to construction, the contractor is required to notify Inspection Services by calling (480) 391-5750. A Planning Inspection (#42) must be conducted prior to commencement of any construction. A note stating this requirement shall be placed on the construction drawings site plan.
5. With the final plans submittal, the Provider shall submit a completed Permission for Private Improvements in the Right-of-Way, to the satisfaction of City staff.
6. All existing public right-of-ways and easements, including P.U.E.'s, shall be shown on all final plans.
7. All existing utilities, including aerial, at grade, and underground shall be shown on all final plans.
8. Sight distance visibility triangles shall be shown on the final plans and shall be in conformance with Figure 3.1-13 of the Design Standards and Policies Manual. All equipment associated with the Wireless Communication Facility shall be located outside of this sight distance triangle.
9. Provider must identify telephone and electrical sources and show detailed connections on final plans, to the satisfaction of City staff.
10. The provider shall provide details of the traffic signal pole connections and transition from the pole to the equipment cabinets, to the satisfaction of the Technical Manager of the traffic signal poles for the City of Scottsdale.

ATTACHMENT A

11. The provider shall submit details showing that the coaxial and all cables are to remain within the traffic signal standard and that all cables and coaxial cable between the signal pole and the equipment shall be completely underground, to the satisfaction of City staff.
12. With the final plans submittal, the provider shall submit dimensioned and scaled details and/or manufacturer cut sheets of the antennas being used. Any changes, including but not limited to the size and location of the proposed antennas shall be subject to further review and approval through the Planning and Development Services Department.
13. With the final plans submittal, the Provider shall provide details of the equipment box, including the size (cu. Ft.), height, color and other dimensions, to the satisfaction of City staff.
14. No microwave dish is being approved as part of case 83-DR-2003.
15. With the final plans submittal, the provider shall submit details of the ground-mounted equipment. Details shall include the total cubic feet of the equipment, height, color and other dimensions, to the satisfaction of City staff.
16. With the final plans submittal, the developer shall provide a detail of the required facility marker or plaque, showing conformance with Ordinance requirements. The location of the plaque shall be shown on the site plans and elevations, to the satisfaction of City staff.
17. Traffic signal pole standard shall not exceed 37'-0" in height, including the antennas.

LANDSCAPE DESIGN:**DRB Stipulations**

18. With the final plans submittal, the applicant shall submit a detailed landscape plan showing what landscaping is proposed, what landscaping is existing, what landscaping is existing to be removed/relocated and how these plants are to be irrigated. The landscape plan shall list specie names (common and botanical), container sizes, and quantities, to the satisfaction of City staff.
19. The proposed equipment screening landscaping shall be equal to or taller than the height of the equipment once mature. Installed landscaping height shall be indicated on the plan, to the satisfaction of City staff.
20. The Wireless Communication Facility equipment is proposed to be located within a landscaped area that is maintained by the Enclave at Sweetwater Ranch subdivision. Before final plans submittal, the applicant shall submit a letter signed by the Enclave at Sweetwater Ranch Home Owners Association that grants permission from the HOA to add landscaping to their maintenance area and allow use of the drip irrigation system.

EXTERIOR LIGHTING DESIGN:**DRB Stipulations**

21. No exterior lighting is approved as part of this case, 83-DR-2003.

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Traffic Signal WCF – Sweetwater & 94th St.
83-DR-2003**

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